

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: )  
ANGEL et al. ) Group Art:  
Serial No. Not Assigned ) Examiner I  
Filed: With Application )

For: PROCESS FOR PREPARING WATER-SOLUBLE OR WATER-DISPERSIBLE  
POLYETHER-CONTAINING POLYMERS AND THE USE THEREOF AS COATING  
AGENTS, BINDERS AND/OR FILM-FORMING EXCIPIENTS IN PHARMACEUTICAL  
DOSAGE FORMS OR PACKAGING MATERIALS OR AS ADDITIVES IN COSMETIC,  
DERMATOLOGICAL OR HYGIENIC PREPARATIONS

PRELIMINARY AMENDMENT

Hon. Commissioner of Patents and Trademarks  
Washington, D.C. 20231

Sir:

Prior to examination of this continuation application, kindly amend the above-identified  
application as follows:

IN THE CLAIMS

3. A process as claimed in [either of claims 1 and 2] claim 1, wherein liquid polyethylene glycol is used as solvent for the free-radical initiator at room temperature.
4. The use of the polymers prepared by a process as claimed in claim 1 [any of claims 1 to 3] as coating agents, binders and/or film-forming excipients for pharmaceutical dosage forms.
5. The use of the polymers prepared by a process as claimed in claim 1 [any of claims 1 to 3] as additives to cosmetic, hygienic and/or dermatological preparations.

6. A cosmetic, dermatological, hygienic or pharmaceutical dosage form comprising at least one of the polymers prepared by a process as claimed in claim 1 [claims 1 to 3] in addition to conventional excipients.

#### REMARKS

The claims have been amended to eliminate multiple dependency. No new matter has been added. A clean copy of the claims is attached.

Entry of the above amendment is respectfully solicited.

Respectfully submitted,

KEIL & WEINKAUF



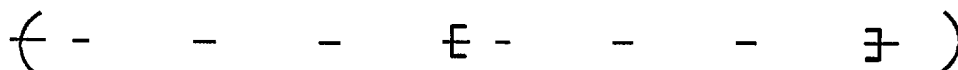
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990115

We claim:

1. A process for preparing graft copolymers of polyvinyl esters by polymerization of
  - a) at least one vinyl ester of aliphatic C<sub>1</sub>-C<sub>24</sub>-carboxylic acids in the presence of
  - b) polyethers which are solid at room temperature and have the general formula I



in which the variables have the following meaning, independently of one another:

R<sup>1</sup> hydrogen, C<sub>1</sub>-C<sub>24</sub>-alkyl, R<sup>9</sup>-C(=O)-, R<sup>9</sup>-NH-C(=O)-, polyalcohol residue;

R<sup>8</sup> hydrogen, C<sub>1</sub>-C<sub>24</sub>-alkyl, R<sup>9</sup>-C(=O)-, R<sup>9</sup>-NH-C(=O)-;

R<sup>2</sup> to R<sup>7</sup>

-(CH<sub>2</sub>)<sub>2</sub>-, -(CH<sub>2</sub>)<sub>3</sub>-, -(CH<sub>2</sub>)<sub>4</sub>-, -CH<sub>2</sub>-CH(CH<sub>3</sub>)-, -CH<sub>2</sub>-CH(CH<sub>2</sub>-CH<sub>3</sub>)-, -CH<sub>2</sub>-CHOR<sup>10</sup>-CH<sub>2</sub>-;

R<sup>9</sup> C<sub>1</sub>-C<sub>24</sub>-alkyl;

R<sup>10</sup> hydrogen, C<sub>1</sub>-C<sub>24</sub>-alkyl, R<sup>9</sup>-C(=O)-;

A -C(=O)-O-, -C(=O)-B-C(=O)-O-,  
-C(=O)-NH-B-NH-C(=O)-O-;

B -(CH<sub>2</sub>)<sub>t</sub>-, arylene, optionally substituted;

n 1 to 8;

s 0 to 500;

t 1 to 12;

u 1 to 5000;

v 0 to 5000;

w 0 to 5000;

x 1 to 5000;

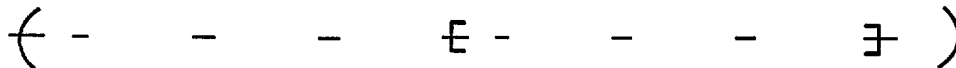
y 0 to 5000;

z 0 to 5000

c) and, where appropriate, at least one other monomer

using a free-radical initiator system, wherein liquid polyalkylene glycol is used as solvent for the free-radical initiator system.

2. A process as claimed in claim 1, wherein the solution of the free-radical initiator system is added continuously throughout the polymerization reaction time.
3. A process as claimed in claim 1, wherein liquid polyethylene glycol is used as solvent for the free-radical initiator at room temperature.
4. The use of the polymers prepared by a process as claimed in claim 1 as coating agents, binders and/or film-forming excipients for pharmaceutical dosage forms.
5. The use of the polymers prepared by a process as claimed in claim 1 as additives to cosmetic, hygienic and/or dermatological preparations.
6. A cosmetic, dermatological, hygienic or pharmaceutical dosage form comprising at least one of the polymers prepared by a process as claimed in claim 1 in addition to conventional excipients.
7. Graft copolymers of polyvinyl esters obtainable by polymerization of
  - a) at least one vinyl ester of aliphatic C<sub>1</sub>-C<sub>24</sub>-carboxylic acids in the presence of
  - b) polyethers which are solid at room temperature and have the general formula I



in which the variables have the following meaning, independently of one another:

R<sup>1</sup> hydrogen, C<sub>1</sub>-C<sub>24</sub>-alkyl, R<sup>9</sup>-C(=O)-, R<sup>9</sup>-NH-C(=O)-, polyalcohol residue;

R<sup>8</sup> hydrogen, C<sub>1</sub>-C<sub>24</sub>-alkyl, R<sup>9</sup>-C(=O)-, R<sup>9</sup>-NH-C(=O)-;

R<sup>2</sup> to R<sup>7</sup>

-(CH<sub>2</sub>)<sub>2</sub>-, -(CH<sub>2</sub>)<sub>3</sub>-, -(CH<sub>2</sub>)<sub>4</sub>-, -CH<sub>2</sub>-CH(CH<sub>3</sub>)-, -CH<sub>2</sub>-CH(CH<sub>2</sub>-CH<sub>3</sub>)-,



$\text{R}^9$   $\text{C}_1\text{-C}_{24}$ -alkyl;

$\text{R}^{10}$  hydrogen,  $\text{C}_1\text{-C}_{24}$ -alkyl,  $\text{R}^9\text{-C(=O)-}$ ;

A  $-\text{C(=O)-O-}$ ,  $-\text{C(=O)-B-C(=O)-O-}$ ,  
 $-\text{C(=O)-NH-B-NH-C(=O)-O-}$ ;

B  $-(\text{CH}_2)_t-$ , arylene, optionally substituted;

n 1 to 8;

s 0 to 500;

t 1 to 12;

u 1 to 5000;

v 0 to 5000;

w 0 to 5000;

x 1 to 5000;

y 0 to 5000;

z 0 to 5000

c) and, where appropriate, at least one other monomer

using a free-radical initiator system, wherein liquid polyalkylene glycol is used as solvent for the free-radical initiator system.